Attorney Docket No.: UM-08441



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Margit Burmeister

Serial No.:

10/699,941

Group No.: 1645

Filed:

11/03/03

Examiner:

Entitled:

Ataxia Associated Gene and Protein

CERTIFICATE RE: SEQUENCE LISTING

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)(1)(i)(A)

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Dated: March 30, 2004

Sir or Madam:

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Dated: March 30, 2004

By:

Tanya' A. Arenson Registration No. 47,391

MEDLEN & CARROLL, LLP 101 Howard Street, Suite 350 San Francisco, California 94105 608/218-6900

SEQUENCE LISTING



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Gly Val	l Glu 35	Leu	Leu	Gly	Ser	Pro 40	Val	Glu	Asp	Thr	Ser 45	Ser	Pro	Pro	
Asn Thi	. Leu	Asn	Phe	Asn	Gly 55	Ala	His	Arg	Lys	Arg 60	Lys	Thr	Leu	Val	

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Asn Thr Leu Asn Phe Asn Gly Ala His Arg Lys Arg Lys Thr Leu Val 50 60

Ala Pro Asp Ile Asn Ile Ser Leu Asp Gln Leu Asp Ile Asn Val Asp 65 70 75 80

Asp Ile Glu Thr Pro Asp Glu Thr Asp Ser Leu Glu Phe Leu Gly Asn 85 90 95

Gly Asn Glu Leu Glu Trp Gly Asp Asp Thr Pro Val Ala Thr Ala Lys
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Asn Met Pro Gly Asp Ser Ala Asp Leu Phe Gly Asp Gly Thr Thr Glu
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Asp Gly Ser Ala Ala Asn Gly Arg Leu Trp Arg Thr Val Ile Ile Gly 130 135 140

Glu Gln Glu His Gly Gly Tyr Tyr Gly Glu Gly Leu Asn Ala Ile Ile 145 150 155 160

Val Phe Ala Ala Cys Phe Leu Pro Asp Ser Ser Leu Pro Asp Tyr His
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Tyr Ile Met Glu Asn Leu Phe Leu Tyr Val Ile Ser Ser Leu Glu Leu 180 185 190

Leu Val Ala Glu Asp Tyr Met Ile Val Tyr Leu Asn Gly Ala Thr Pro 195 200 205

Arg Arg Met Pro Gly Ile Gly Trp Leu Lys Lys Cys Tyr Val His 210 220

Pro Ser Trp Phe Ile Arg Thr Val Leu Ala Ile Ser Arg Pro Phe Ile 225 230 235 240

Ser Val Lys Phe Ile Asn Lys Ile Gln Tyr Val His Ser Leu Glu Asp 245 250 255

Leu Glu Gln Leu Ile Pro Met Glu His Val Gln Ile Pro Asp Cys Val 260 265 270

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Pro Gln Pro Glu Phe Val Met Ala Pro Val Thr Glu Asp Gln Glu Thr 290 295 300

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<213> Mus musculus

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Ser Thr Leu Asn Leu Ser Gly Ala His Arg Lys Arg Lys Thr Leu Val 50 60

Ala Pro Glu Ile Asn Ile Ser Leu Asp Gln Leu Asp Ile Asn Val Asp 65 70 75 80

Asp Ile Glu Thr Pro Asp Glu Thr Asp Ser Leu Glu Phe Leu Gly Asn 85 90 95

Gly Asn Glu Leu Glu Trp Glu Asp Asp Thr Pro Val Ala Thr Ala Lys
100 105 110

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Tyr Ile Met Glu Asn Leu Phe Leu Tyr Val Ile Ser Ser Leu Glu Leu 180 185 190

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Arg Arg Met Pro Gly Ile Gly Trp Leu Lys Lys Cys Tyr Val His 210 215 220

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Ser Val Lys Phe Ile Ser Lys Ile Gln Tyr Val His Ser Leu Glu Glu 245 250 255

Leu Glu Arg Leu Ile Pro Met Glu His Val Gln Leu Pro Asp Cys Val
260 265 270

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Thr Ser Met Ser 305

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<212> PRT

<213> Homo sapiens

<400> 17

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- <213> Mus musculus

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Arg Arg Ile Lys Leu Thr Ala Pro Asn Ile Asn Leu Ser Leu Asp Gln 35 40 45

Ile Asp Ile Asn Val Asp Glu Leu Asp Thr Pro Asp Glu Ala Asp Ser 50 55 60

Phe Glu Tyr Thr Asn His Glu Asp Pro Thr Ala Asn Lys Ser Ser Gly 65 70 75 80

Gln Glu Ser Glu Ser Ile Pro Glu Tyr Thr Ala Glu Glu Glu Arg Glu 85 90 95

Asp Asn Arg Leu Trp Arg Thr Val Val Ile Gly Glu Gln Gly 100 105 110

Gly Tyr Tyr Gly Asp Gly Leu Asn Ala Ile Ile Val Phe Ala Ala Cys 115 120 125

Phe Leu Pro Asp Ser Ser Arg Ala Asp Tyr His Tyr Val Met Glu Asn 130 135 140

Leu Phe Leu Tyr Val Ile Ser Thr Leu Glu Leu Met Val Ala Glu Asp . 155 160

Tyr Met Ile Val Tyr Leu Asn Gly Ala Thr Pro Arg Arg Met Pro 165 170 175

Gly Leu Gly Trp Met Lys Lys Cys Tyr Val His Pro Ser Trp Phe Ile 180 185 190

Arg Thr Ile Leu Ala Val Thr Arg Pro Phe Ile Ser Ser Lys Phe Ser 195 200 205

Ser Lys Ile Lys Tyr Val Thr Ser Leu Ser Glu Leu Ser Gly Leu Ile 210 215 220 Pro Met Asp Cys Ile His Ile Pro Glu Ser Ile Ile Lys Leu Asp Glu 225 230 235 240

Glu Leu Arg Glu Ala Ser Glu Ala Ala Lys Thr Ser Cys Leu Tyr Asn 245 250 255

Asp Pro Glu

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<400> 19

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Ile Pro Leu Pro Glu Asp Asp Ser Ile Glu Ala Asp Ile Leu Ala Ile
20 25 30

Thr Gly Pro Glu Asp Gln Pro Gly Ser Leu Glu Val Asn Gly Asn Lys
35 40 45

Val Arg Lys Lys Leu Met Ala Pro Asp Ile Ser Leu Thr Leu Asp Pro 50 55 60

Gly Glu Ile Asp Leu Asp Gly Leu Asp Thr Pro Ser Glu Asn Ser Asn 65 70 75 80

Glu Phe Glu Trp Glu Asp Asp Leu Pro Lys Pro Lys Thr Thr Glu Val 85 90 95

Ile Arg Lys Gly Ser Ile Thr Glu Tyr Thr Ala Ala Glu Glu Lys Glu
100 105 110

Asp Gly Arg Arg Trp Arg Met Phe Arg Ile Gly Glu Gln Asp His Gly
115 120 125

Gly Tyr Tyr Gly Asp Gly Leu Asn Ala Ile Val Val Phe Ala Val Cys 130 135 140

Phe Met Pro Glu Ser Ser Gln Pro Asn Tyr Arg Tyr Leu Met Asp Asn 145 150 155 160

Leu Phe Lys Tyr Val Ile Gly Thr Leu Glu Leu Leu Val Ala Glu Asn 165 170 175

Tyr Met Ile Val Tyr Leu Asn Gly Ala Thr Thr Arg Arg Lys Met Pro 180 185 190

Ser Leu Gly Trp Leu Arg Lys Cys Tyr Val His Pro Ser Trp Phe Ile 195 200 205

Arg Thr Leu Leu Ala Val Thr Arg Pro Phe Ile Ser Ser Lys Phe Ser 210 220

Gln Lys Ile Arg Tyr Val Phe Asn Leu Ala Glu Leu Ala Glu Leu Val 225 230 235 240

Pro Met Glu Tyr Val Gly Ile Pro Glu Cys Ile Lys Gln Val Glu Glu 245 250 255

Leu Asn Gly Lys Gln Asp Glu 260

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Ile Pro Leu Pro Glu Asp Asp Ser Ile Glu Ala Asp Thr Leu Asp Gly 20 25 30

Thr Asp Pro Asp Arg Gln Pro Gly Ser Leu Glu Val Asn Gly Asn Lys 35 40 45

Val Arg Lys Leu Met Ala Pro Asp Ile Ser Leu Thr Leu Asp Pro 50 55 60

Gly Glu Val Asp Leu Glu Gly Leu Asp Thr Pro Ser Glu Asn Ser Asp 65 70 75 80

Glu Phe Glu Trp Glu Asp Asp Leu Pro Lys Pro Lys Thr Thr Glu Val 85 90 95

Ile Arg Lys Gly Ser Ile Thr Glu Tyr Thr Ala Thr Glu Glu Lys Gly
100 105 110

Asp Gly Arg Arg Trp Arg Met Phe Arg Ile Gly Glu Gln Asp His Gly 115 120 125

Gly Tyr Tyr Gly Asp Gly Leu Asn Ala Ile Val Val Phe Ala Val Cys 130 135

Phe Met Pro Glu Ser Gly Gln Pro Asn Tyr Arg Tyr Leu Met Asp Asn

Leu Phe Lys Tyr Val Ile Gly Thr Leu Glu Leu Leu Val Ala Glu Asn

Tyr Met Ile Ile Tyr Leu Asn Gly Ala Thr Thr Arg Arg Lys Met Pro 185

Ser Leu Gly Trp Leu Arg Arg Cys Tyr Val His Pro Ser Trp Phe Ile

Arg Thr Leu Leu Ala Val Thr Arg Pro Phe Ile Ser Ser Lys Phe Ser 215

Gln Lys Ile Arg Tyr Val Phe Asn Leu Ala Glu Leu Ala Glu Leu Val

Pro Met Glu Tyr Val Gly Ile Pro Glu Cys Ile Lys Gln Tyr Glu Glu

Glu Lys Phe Lys Lys Arg Val Asp Gln Glu Pro Leu Asn Gly Lys Gln 265

Glu Pro

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<213> Drosophila melanogaster

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Thr Leu Pro Asp Gly Arg Thr Gly Gly Tyr Gly Gly Gln Asn Ala Ile

Val Ile Phe Cys Ala Cys His Leu Pro Asp Arg Ser Arg Ala Arg Tyr

Ser Tyr Val Met Asp Asn Leu Phe Leu Tyr Val Val Lys Thr Leu Glu

Gln 1 65	Leu	Val	Thr	Asp	Asp 70	Tyr	Val	Leu	Ile	Tyr 75	Leu	His	Gly	Gly	Ser 80	
Asn A	Arg	Arg	Asn	Val 85	Pro	Pro	Phe	Pro	Trp 90	Leu	Lys	Arg	Cys	Tyr 95	Val	
His I	Pro	Thr	Phe 100	Trp	Ile	Lys	Ser	Leu 105	Val	Trp	Met	Ala	Arg 110	Pro	Phe	
Val S	Ser	Thr 115	Lys	Phe	Trp	Arg	Lys 120	Leu	Val	Tyr	Val	Lys 125	Ser	Leu	Glu	
Glu I	Leu 130	Gly	Met	His	Val	Val 135	Val	Glu	Lys	Ala	Ala 140	Ile	Pro	Glu	Lys	
Val I 145	Lys	Gln	Tyr	Asp	Ala 150	Lys	Arg	His								
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Gly Ser Glu Gly Pro Gly Ser Val Ser Asp Ala Gln Leu His Pro Gly
20 25 30

Arg Ala Arg Leu Cys Leu Pro Val Arg Arg Gly Cys Leu Ser Cys 35 40 45

Arg Gly Val Ile Pro Ala Ser Ser Gln Cys Leu Phe Pro Ala Pro Met 50 60

Gly Thr Thr Glu Ala Thr 65 70

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<213> Homo sapiens

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Pro Leu Cys Pro Ser Asp Ser Ala Glu Ala Ala Ser Ala Thr Glu Ile 20 25 30

Ile Phe Trp Val Thr Arg Val Ser Arg Pro Leu Leu Phe Pro Ala Leu 35 40 45

Met Gly Thr Thr Glu Ala Thr 50 55

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<213> Homo sapiens

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Ile Pro Leu Pro Glu Asp Asp Ser Ile Glu Ala Asp Ile Leu Ala Ile
20 25 30

Thr Gly Pro Glu Asp Gln Pro Gly Ser Leu Glu Val Asn Gly Asn Lys
35 40 45

Val	Arg 50	Lys	Lys	Leu	Met	Ala 55	Pro	Asp	Ile	Ser	Leu 60	Thr	Leu	Asp	Pro
Ser 65	Asp	Gly	Ser	Val	Leu 70	Ser	Asp	Asp	Leu	Asp 75	Glu	Ser	Gly	Glu	Ile 80
Asp	Leu	Asp	Gly	Leu 85	Asp	Thr	Pro	Ser	Glu 90	Asn	Ser	Asn	Glu	Phe 95	Glu
Trp	Glu	Asp	Asp 100	Leu	Pro	Lys	Pro	Lys 105	Thr	Thr	Glu	Val	Ile 110	Arg	Lys
Gly	Ser	Ile 115	Thr	Glu	Tyr	Thr	Ala 120	Ala	Glu	Glu	Lys	Glu 125	Asp	Gly	Arg
Arg	Trp 130	Arg	Met	Phe	Arg	Ile 135	Gly	Glu	Gln	Asp	His 140	Arg	Val	Asp	Met
Lys 145	Ala	Ile	Glu	Pro	Tyr 150	Lys	Lys	Val	Ile	Ser 155	His	Gly	Gly	Tyr	Tyr 160
Gly	Asp	Gly	Leu	Asn 165	Ala	Ile	Val	Val	Phe 170	Ala	Val	Cys	Phe	Met 175	Pro
Glu	Ser	Ser	Gln 180	Pro	Asn	Tyr	Arg	Tyr 185	Leu	Met	Asp	Asn	Leu 190	Phe	Lys
Tyr	Val	Ile 195	Gly	Thr	Leu	Glu	Leu 200	Leu	Val	Ala	Glu	Asn 205	Tyr	Met	Ile
Val	Tyr 210	Leu	Asn	Gly	Ala	Thr 215	Thr	Arg	Arg	Lys	Met 220	Pro	Ser	Leu	Gly
Trp 225	Leu	Arg	Lys	Cys	Tyr 230	Gln	Gln	Ile	Asp	Arg 235	Arg	Leu	Arg	Lys	Asn 240
Leu	Lys	Ser	Leu	Ile 245	Ile	Val	His	Pro	Ser 250	Trp	Phe	Ile	Arg	Thr 255	Leu
Leu	Ala	Val	Thr 260	Arg	Pro	Phe	Ile	Ser 265	Ser	Lys	Phe	Ser	Gln 270	Lys	Ile

Arg Tyr Val Phe Asn Leu Ala Glu Leu Ala Glu Leu Val Pro Met Glu 275 280 285

Tyr Val Gly Ile Pro Glu Cys Ile Lys Gln Val Asp Gln Glu Leu Asn 290 295 300

Gly Lys Gln Asp Glu Pro Lys Asn Glu Gln 305

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Ile Pro Leu Pro Glu Asp Asp Ser Ile Glu Ala Asp Ile Leu Ala Ile
20 25 30

Thr Gly Pro Glu Asp Gln Pro Gly Ser Leu Glu Val Asn Gly Asn Lys
35 40 45

Val Arg Lys Lys Leu Met Ala Pro Asp Ile Ser Leu Thr Leu Asp Pro 50 55 60

Ser Asp Gly Ser Val Leu Ser Asp Asp Leu Asp Glu Ser Gly Glu Ile 65 70 75 80

Asp Leu Asp Gly Leu Asp Thr Pro Ser Glu Asn Ser Asn Glu Phe Glu 85 90 95

Trp Glu Asp Asp Leu Pro Lys Pro Lys Thr Thr Glu Val Ile Arg Lys
100 105 110

Gly Ser Ile Thr Glu Tyr Thr Ala Ala Glu Glu Lys Glu Asp Gly Arg 115 120 125

Arg Trp Arg Met Phe Arg Ile Gly Glu Gln Asp His Arg Val Asp Met 130 135 140

Lys Ala Ile Glu Pro Tyr Lys Lys Val Ile Ser His Gly Gly Tyr Tyr 145 150 155 160

Gly Asp Gly Leu Asn Ala Ile Val Val Phe Ala Val Cys Phe Met Pro 165 170 175 Glu Ser Ser Gln Pro Asn Tyr Arg Tyr Leu Met Asp Asn Leu Phe Lys 180 185 190

Tyr Val Ile Gly Thr Leu Glu Leu Leu Val Ala Glu Asn Tyr Met Ile 195 200 205

Val Tyr Leu Asn Gly Ala Thr Thr Arg Arg Lys Met Pro Ser Leu Gly 210 215 220

Trp Leu Arg Lys Cys Tyr Gln Gln Ile Asp Arg Arg Leu Arg Lys Asn 225 230 235 240

Leu Lys Ser Leu Ile Ile Val His Pro Ser Trp Phe Ile Arg Thr Leu 245 250 255

Leu Ala Val Thr Arg Pro Phe Ile Ser Ser Lys Phe Ser Gln Lys Ile
260 265 270

Arg Tyr Val Phe Asn Leu Ala Glu Leu Ala Glu Leu Val Pro Met Glu 275 280 285

Tyr Val Gly Ile Pro Glu Cys Ile Lys Gln Val Asp Gln Glu Leu Asn 290 295 300

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